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| APPLICATION NO | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO | CONFIRMATION NO |
|----------------|-------------|----------------------|--------------------|-----------------|
| 09 550,693     | 04 17 2000  | Michael Cole         | 602-1479           | 1244            |

7590 11 14 2002  
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EXAMINER

MANOHARAN, VIRGINIA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1764

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DATE MAILED: 11 14 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/550,693

Applicant(s)

COLE, MICHAEL

Examiner

Virginia Manoharan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other \_\_\_\_\_

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### DETAILED ACTION

Applicant's election of Group II, claims 5-20 in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors e.g. typographical, grammar, idiomatic, syntax and etc. Applicant's cooperation is requested in correction any errors of which applicant may become aware in the specification.

Claims 5-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Claims 5-20 should be rewritten in independent form. Otherwise, there are no proper antecedent supports e.g., "...the liquid" and "said gas" recited in claims 5.

B. The claims, as they are framed, are functional to the point of being indefinite inasmuch as the narrative process language and the functional language make the actual structures vague and the true structural limitations for apparatus claims are not readily determine. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner is to present a complete operative device.

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For examples: the container, suction tube, pump, refrigerant conducting device, and etc., must be positively reacted in the claims as structures in an apparatus claim.

C. The term "close" in claim 5, line 3, is a relative term which renders the claim indefinite. The term "close" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

D. The claimed languages: "...the permanent gas" in claim 6; the recirculating system" in claim 12 and "the mixture of the inert gas" in claim 20 all lack antecedent basis for supports in the claims

E. In claim 20, line 3, "vapour" should be -vapor- as the latter is the term normally used in the U.S.

F. Claim 8 is at odds with claim 7, the claim from which it depends, relative to where the container is mounted. Claim 8 recites "a vacuum chamber in which the container is mounted..", whereas, claim 7 recites "...the container is mounted in a vortex evaporator. (A dependent claim incorporated every features of the claim from which it depends and can not change or orient the limitations already recited in the independent claim)..

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stothers or Yamazaki in view of Doi et al.

Stothers or Yamazaki discloses substantially the features of the apparatus as claimed.

See e.g., Fig. 1 with devices  $R_1$ ,  $R_2$  and recirculation lines e.g., elements V5, V12, 8, F6, V11, K1 to R1 in Yamazaki; and Fig. 1 of Stothers. The apparatus of Yamazaki or Stothers differs from the claimed invention in that claim 5, for example, recites "...a suction tube whose open end is maintained close above top surface of liquid as the liquid level drops in the container due to evaporation..."

However, providing a suction tube as claimed above is a known expediency in the art as taught by Doi et al. See the drawings @ Figs. 1-8, and the claims at cols. 9-10.

To incorporate the device of Doi to the apparatus of Stothers or Yamazaki would have been obvious to one of ordinary skill in the art for the advantages taught by Doi at col. 7, lines 49-67 through col. 8, lines 1-2. That is, interalia, a high-concentration solvent vapor can be sucked with a small quantity of air, the power of the suction device can be greatly reduced from that required by conventional device.... a high efficiency operation can be achieved...."

Claims 9-10 and 16 do not define any elements of a device, and accordingly can not be distinguished from the prior art in the structural sense.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- A. Humiston discloses a centrifugal vacuum evaporator.
- B. Oesch et al, Haberland and Kanamaru et al all disclose a vacuum device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manharan whose telephone number is (703) 308-3844. The examiner can normally be reached on Tuesday-Friday from 7:30 a.m. to 6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Glenn Caldarola, can be reached on (703) 308-6824. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

Manoharan/sp

November 13, 2002

*[Handwritten signature]*

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11/13/02 ✓*